S53 Smartphone
Service Guide

Service guide files and updates are available
on the ACER/CSD web; for more information,
please refer to http://gcsd.acer.com.tw/GCSD_Portal/

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Revision History

Please refer to the table below for the updates made on the **S53** smartphone service guide.

Date	Chapter	Updates
10-Aug-2014		Initial release

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Conventions

The following conventions are used in this manual:

SCREEN MESSAGES	Denotes actual messages that appear on screen.
NOTE	Gives bits and pieces of additional Information related to the current topic.
WARNING	Alerts you to any damage that might result from doing or not doing specific actions.
CAUTION	Gives precautionary measures to avoid possible hardware or software problems.
IMPOTENT	Reminds you to do specific actions, relevant to the accomplishment of procedure.

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Preface

Before using this information and the product it supports, please read the following general information.

1. This service guide provides you with all technical information relating to the BASIC CONFIGURATION decide for Acer's "global" product offering. To better fit local market requirement and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine. These LOCALIZED FEATURES will NOT be recovered in this generic service guide. In such cases, please contact your regional office or the responsible personnel/channel to provide you with further technical details.
2. Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noticed in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDER, your Acer office may have a DIFFERENT part number code to those given in the FRU of this printed Service Guide. You must use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

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System Specifications

Features

Below is a brief summary of the smartphone's many features:

Operating System

- Android 4.4.2 (KitKat)

Processor

- MTK MT6592 (LTE/3G), octa-core 1.7 GHz

Memory

- 2Gb LPDDR3 RAM , with 16GB eMMC

Display

- 5.7" HD (1280x720), 24 bit, 16M colors Transmissive IPS LCD
  - 257 PPI
  - Brightness (min): 480 nits
  - Contrast Ratio >1000
  - NTSC 71%
  - Wide viewing angle 85/85/85/85 (Contrast ratio<10)

Touch

- Touch technology: Capacitive
- Multi Touch Support: Multi; _10__ Points touch
- Touch Lens Type: Single Glass (Zero Air Gap, Gorilla Glass 3)
- Air Gap: 0 mm
- Printing Cap sensor: Back/Home/Menu

Dimensions

- 153.3 x 80.4 x 8.5 mm (Slimmest)

Weight

- 163g

Communications

- HSPA+/WCDMA: 2100 / 900 MHz
- GSM/GPRS/EDGE: 850MHz / 900MHz / 1800MHz / 1900MHz
- LTE: LTE: 800/ 1800 / 2100 /2600 MHz
- HSDPA up to 42Mbps , HSUPA up to 5.74Mbps
- LTE Cat.4 download speed up to 150Mbps, 3G up to 42Mbps
- GPRS Class 12 /EDGE Class 12
- MMS, SMS, Email, IM

Wireless LAN

- I IEEE 802.11ac/a/b/g/n (support WAPI in China SKU)

GPS

- GPS/AGPS+GLONASS

Bluetooth

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- Bluetooth 4.0
- Support BT profile

  □FTP □GAVDP □GAP □GATT □GOEP □HFP □HID □HSP □MAP □OBEX □OPP □PAN □PBAP, PBA □SPP□A2DP

  □ATT□AVRCP

Camera

- Main camera: 13 MP auto focus, F1.8, BSI sensor, Closed Loop, LED Flash Light ,

  1080p video recording
- Front camera: 2 MP , F2.0, 88 degree wide angle, BSI sensor, 1080p video recording

Sensor

- Ambient L-sensor
- G-sensor
- e-Compass
- Proximity Sensor
- Gyro-sensor
- Hall-sensor

Expansibility

- NFC, Micro SD slot (Up to 64GB, SDXC 3.0 compatible), Micro USB, 3.5mm audio jack

Interface/Audio

- HD voice
- Echo/Noise cancellation
- Built-in microphone and speaker, 3.5mm headset jack, hands-free mode supported
- DTS

Interface/Data

- Micro USB (USB 2.1 High Speed), support OTG (FAT, FAT32)

Output/Video

- Wireless Display(Miracast)

Media Format and Codec Support

- Video Encoder H.263, H.264
- Video Decoder H.263, H.264, MPEG-4, WMV
- Audio Encoder AAC LC/LTP, AMR-NB, AMR-WB
- Audio Decoder AAC+, eAAC+, WMA, WAV, MP3, MIDI, Vorbis, DCM, WAVE, AMR-NB, AMR-WB
- Image Encoder JPEG, PNG, WEBP
- Image Decoder JPEG, GIF, PNG, BMP, WEBP

Battery

- 2700 mAh, replaceable Li-polymer battery
- Talk time: up to 11 hours ; Standby time: up to 500 hours
- LTE Standby time: up to 360 hours

Ergonomic Design

- Touch Window for fingertip
- Buttons:
  - Android button
- Side keys:
  - Volume Up/Down
  - Power Button

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Power

- Voltage range/frequency: 100 ~ 240V AC, 50/60 HZ
- DC Adaptor, 5V/2A, Micro-USB

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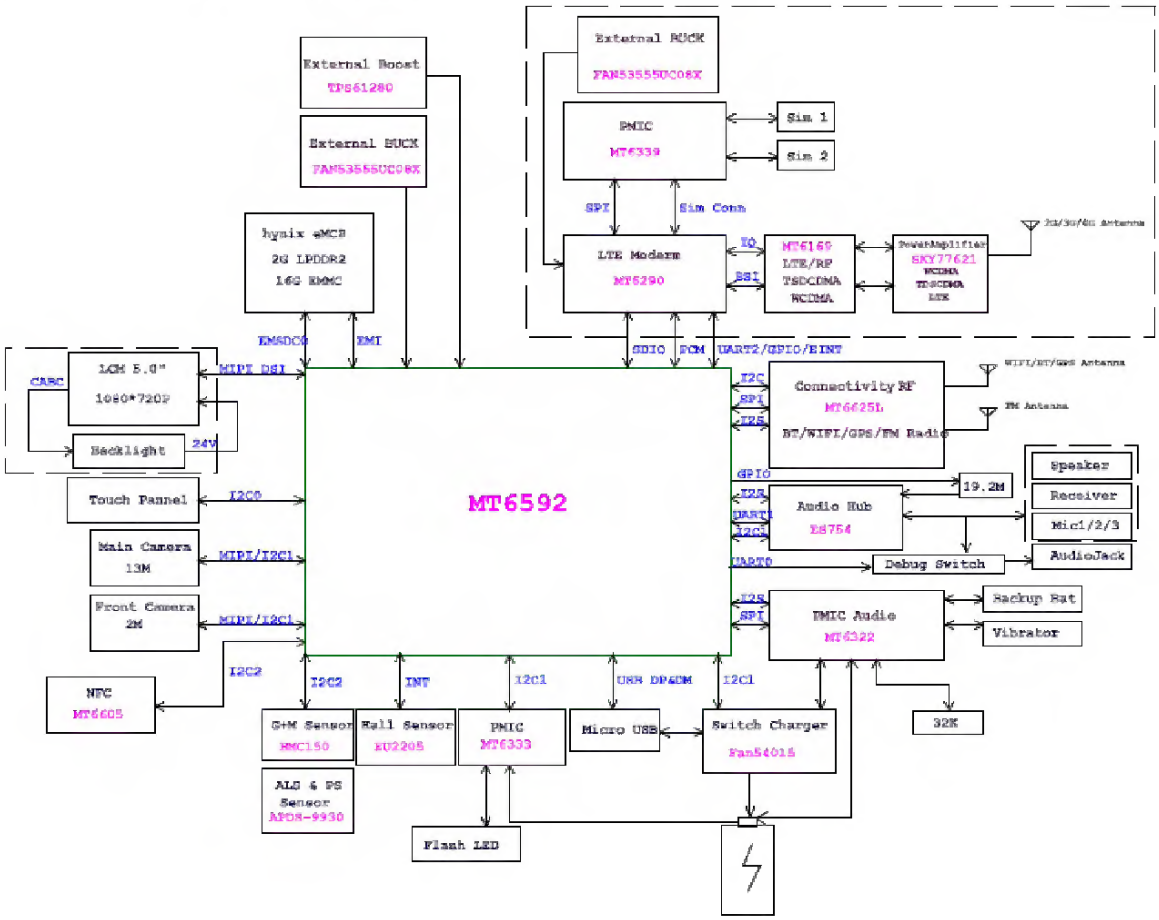
System Block Diagram



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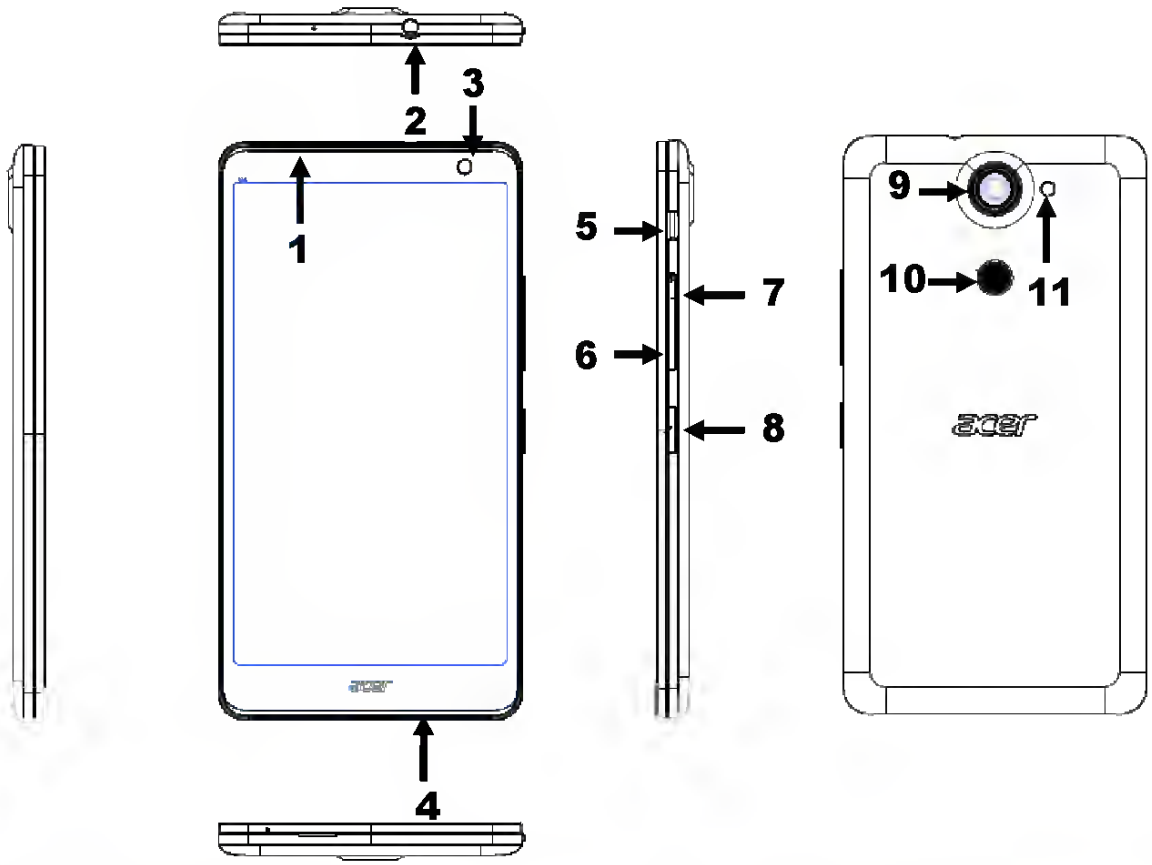
Your Acer Smartphone Tour

View



Item	Description	Item	Description
1	LED indicator	7	Volume up key
2	3.5mm headphone jack	8	Power key
3	Front camera	9	Rear camera
4	Speaker	10	Acer rapid key
5	Micro USB connector	11	Flash light
6	Volume down key		

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Software Upgrade (SD Download)

Features List

- SD download is an easy way for device to perform image upgrade, it supports below features
  - Support ROM image upgrade without PC
  - Support ROM image upgrade between different SKUs
  - Support ROM image upgrade with default NV item update
  - Support display image download progress bar upon screen
  - Support image file integrity check

Abstract

- This document will descript how to use SD card to upgrade Acer S520 images (SD/SDs).

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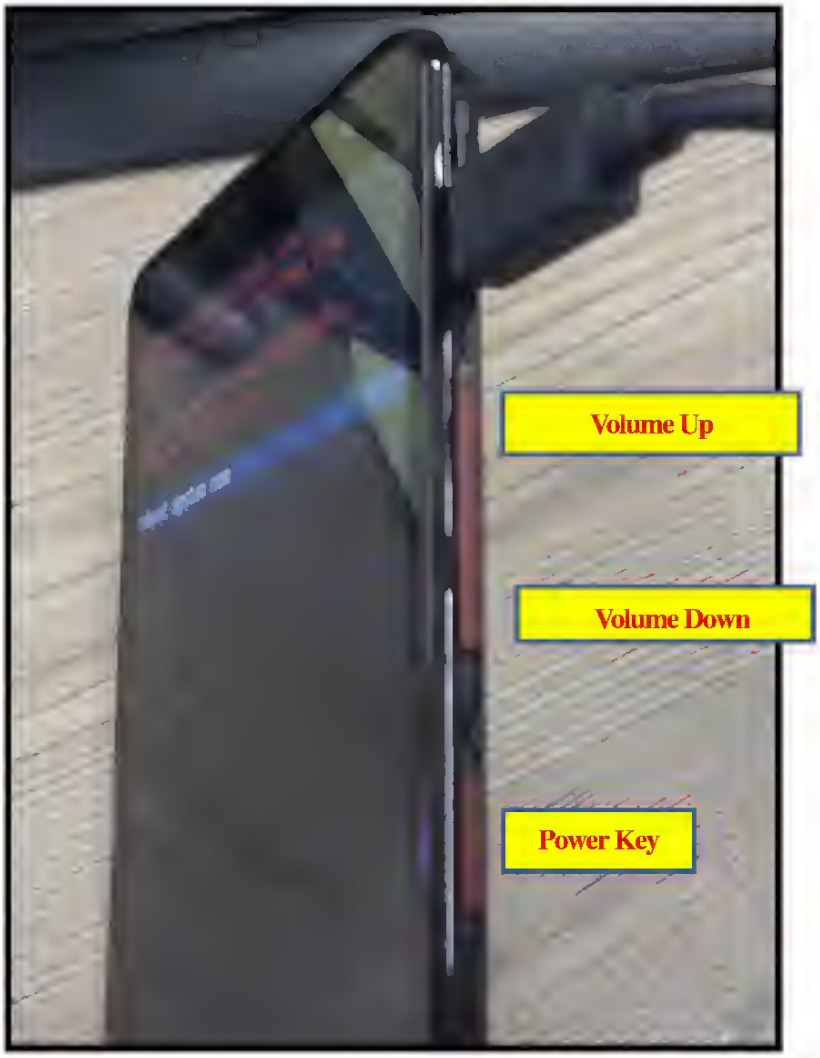
How to perform SD download

Key Definition:



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Step1. Place update zip file in micro SD card.

Step2. Insert micro SD card in SD card slot.

Step3. Make sure your device is power off.

Step4. Enter Boot Menu:

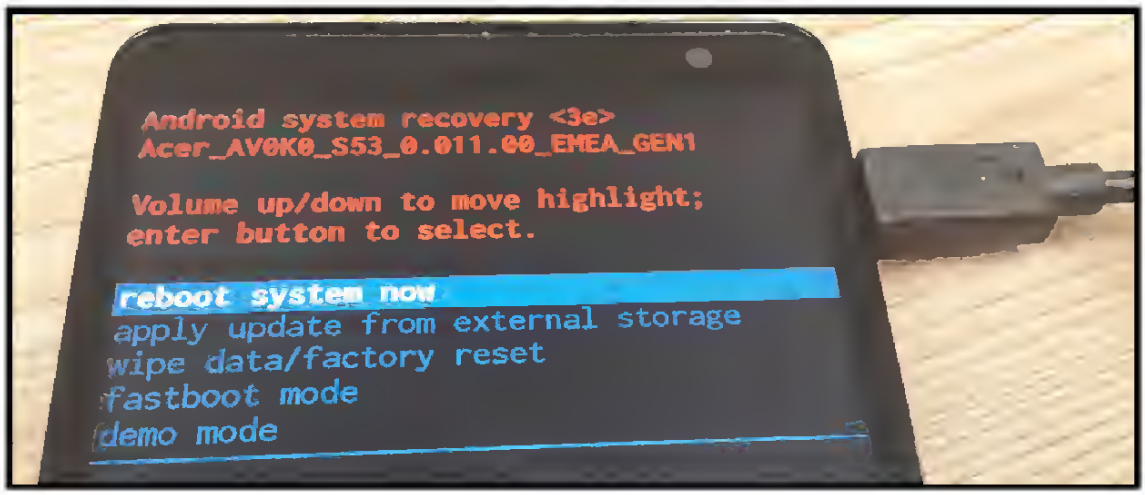
Sequential button command:

1. User shall press both volume up and power key to power on device, device vibrates once.

2. Release power key and hold volume up over 3 seconds, device vibrates once.

3. Release all key and press volume down and hold volume down on over 3 seconds, device vibrates once.

4. Release all key to launch boot menu. (As following figure.)



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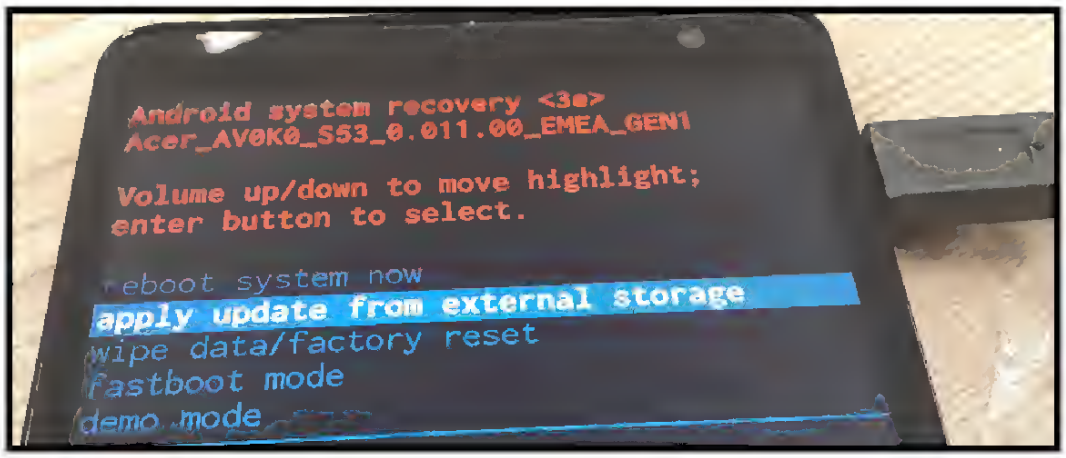
Step5. Press Volume down choose “apply update from external storage”

Press power key



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Step6. Move blue color bar to your update zip file.

Volume up: move up

Volume down: move down

Power key: choose item

As following figure I choose update.zip then press power key

Start update file: update.zip

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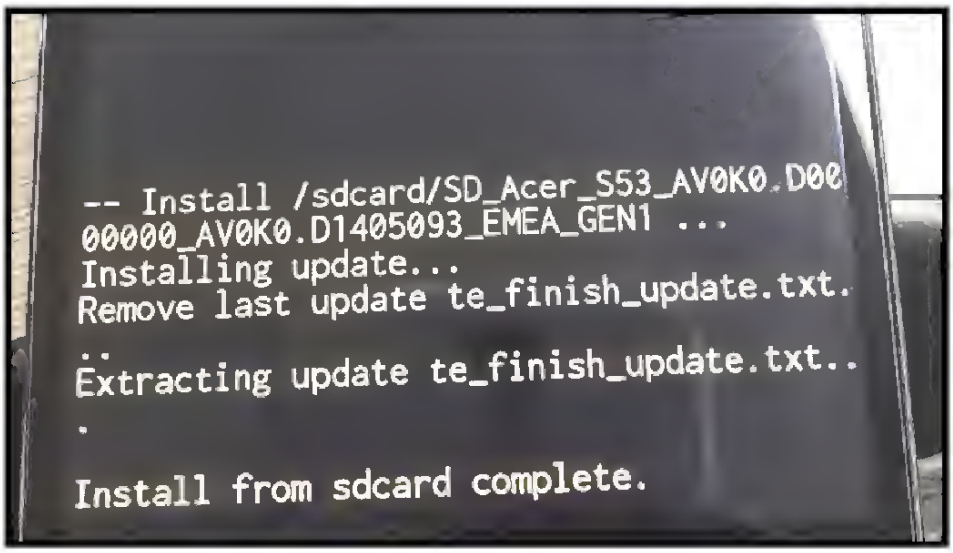
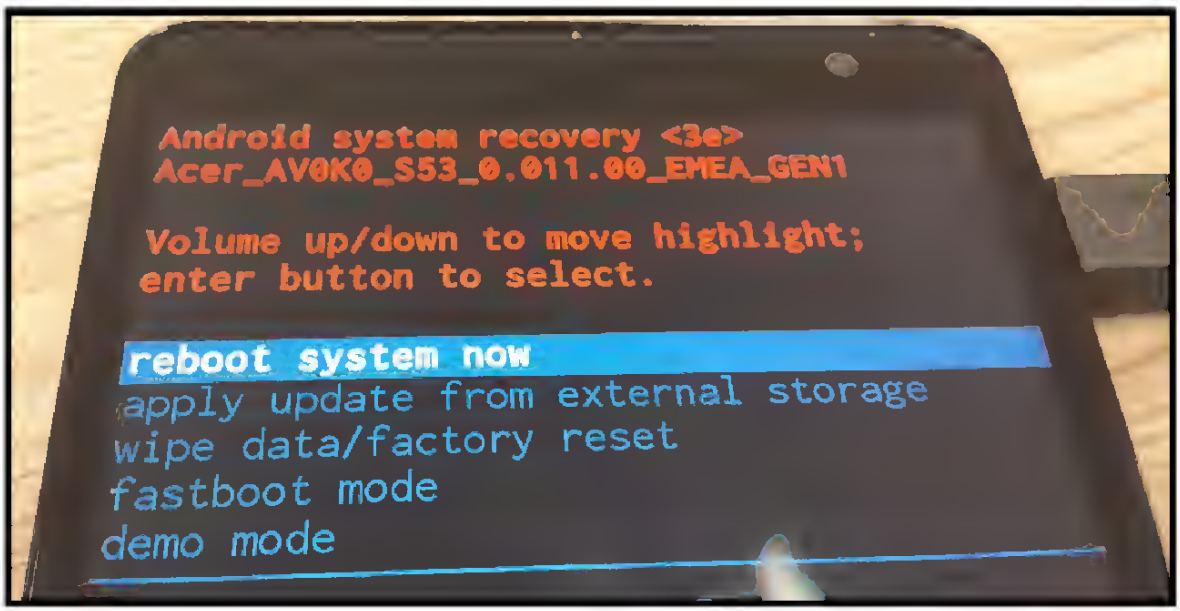
Step7. Show "Install from sdcard complete" If update process success.



Step8. Choose "reboot system now" to reboot device



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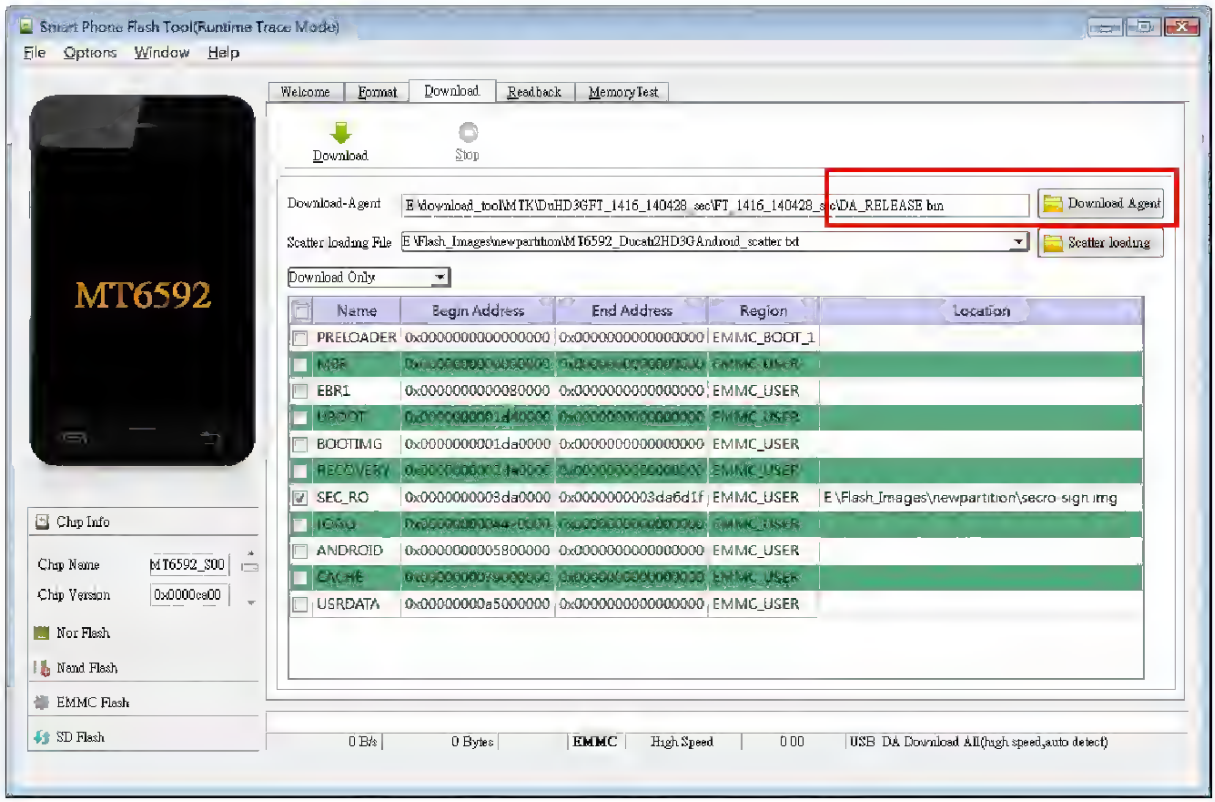
How to perform flash tool download

Flash tool version: FT_1416_140428_sec

Flash OS step：

Start Flash Tool

(1) Click "Download Agent" to load DA_RELEASE.bin from flash tool



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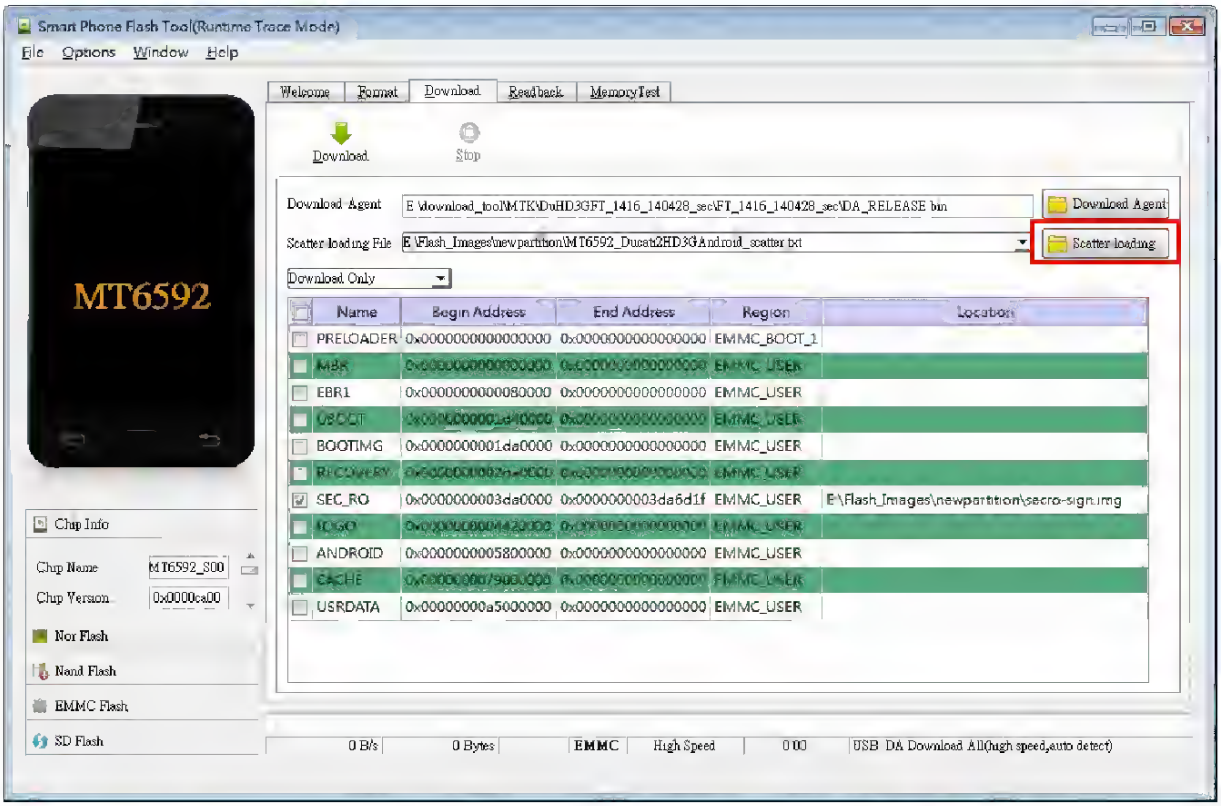
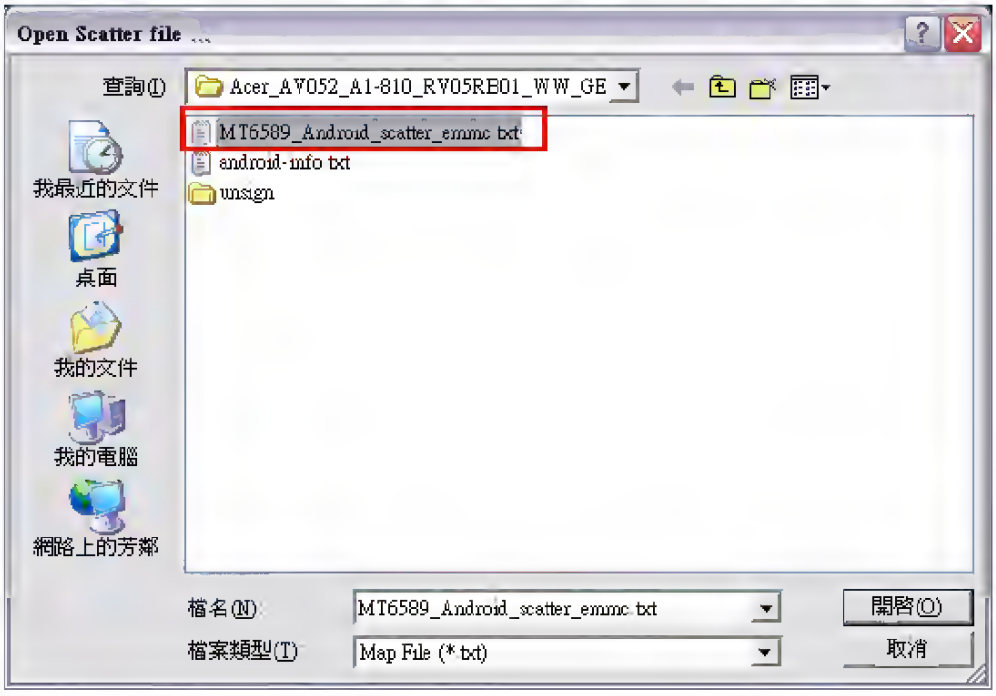
(2) Click "Scatter-loading" to load MT6589_Android_scatter_emmc.txt from the image folder which you want to flash.





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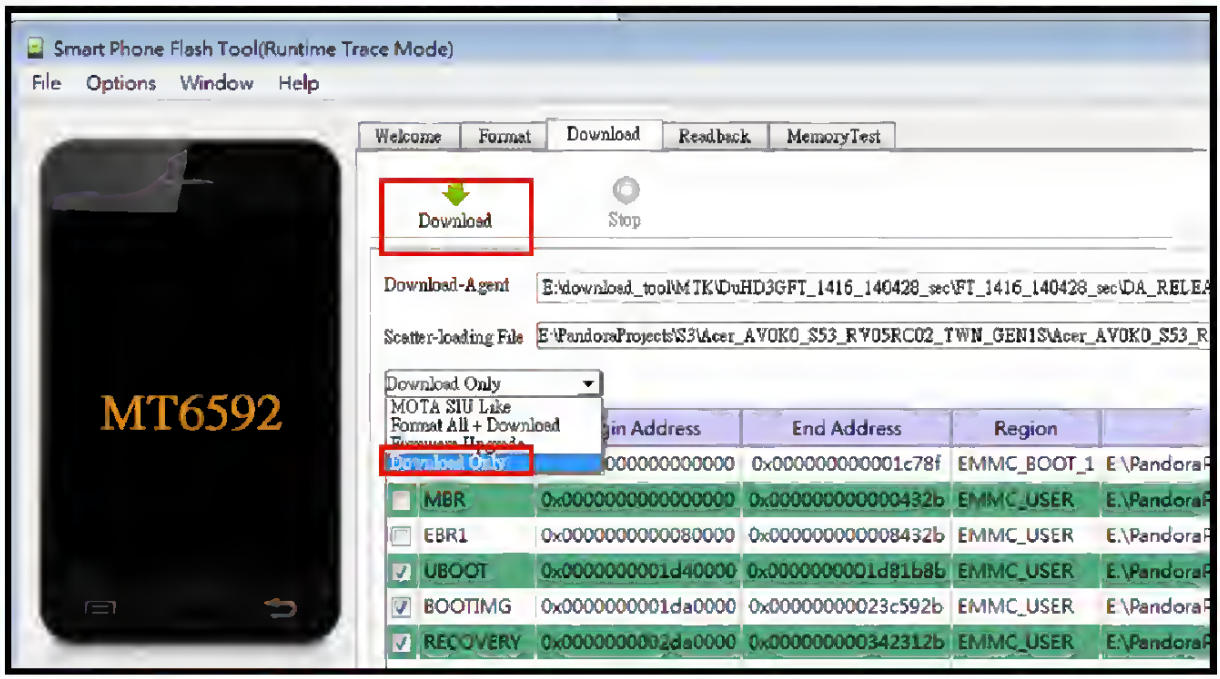
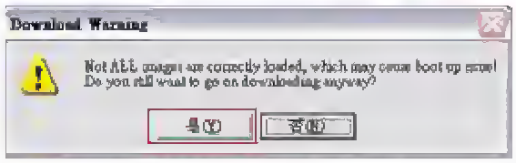
(3) After loaed scatter, you can see the screen as below picture.

Please dis-selected "PRELOADER", "MBR", "EBR1"and "SEC_RO"

name
region address
begin address
end address
location
PRELOADER 0x00000000 0x00000000 0x0001E57F C:\Documents and Settings\Crystal Lin.HQ\桌面\Acer_AV052_A1 810_D1304081_WW_GEN1\preloader_a1 810_ww_gen1 bin
MBR 0x00C00000 0x00C00000 0x00C0431F C:\Documents and Settings\Crystal Lin.HQ\桌面\Acer_AV052_A1-810_D1304081_WW_GEN1\MBR-sign
EBR1 0x00C80000 0x00C80000 0x00C8431F C:\Documents and Settings\Crystal Lin.HQ\桌面\Acer_AV052_A1-810_D1304081_WW_GEN1\EBR1-sign
UBOOT 0x02D20000 0x02D20000 0x02D5F147 C:\Documents and Settings\Crystal Lin.HQ\桌面\Acer_AV052_A1-810_D1304081_WW_GEN1\lk-sign bin
BOOTIMG 0x02D80000 0x02D80000 0x0323431F C:\Documents and Settings\Crystal Lin.HQ\桌面\Acer_AV052_A1-810_D1304081_WW_GEN1\boot.img
RECOVERY 0x03380000 0x03380000 0x038B011F C:\Documents and Settings\Crystal Lin.HQ\桌面\Acer_AV052_A1-810_D1304081_WW_GEN1\recovery.img
SEC_RO 0x03D80000 0x03D80000 0x03D86D1F C:\Documents and Settings\Crystal Lin.HQ\桌面\Acer_AV052_A1-810_D1304081_WW_GEN1\secro-sro-lock-sign.img
LOGO 0x04400000 0x04400000 0x044A454B C:\Documents and Settings\Crystal Lin.HQ\桌面\Acer_AV052_A1-810_D1304081_WW_GEN1\logo.sign bin
ANDROID 0x05100000 0x05100000 0x28DE2713 C:\Documents and Settings\Crystal Lin.HQ\桌面\Acer_AV052_A1-810_D1304081_WW_GEN1\system.img
CACHE 0x45100000 0x45100000 0x45E0D3CF C:\Documents and Settings\Crystal Lin.HQ\桌面\Acer_AV052_A1-810_D1304081_WW_GEN1\cache-sign.img
USRDATA 0x70D00000 0x70D00000 0x71F5C423 C:\Documents and Settings\Crystal Lin.HQ\桌面\Acer_AV052_A1-810_D1304081_WW_GEN1\userdata.img

Please selected "Download Only" then click "Download" and "Yes" when pop up download warning message.
(This warning message is due to we didn't selected all items) Tool is ready to download image to phone.
Make sure phone is off then connect to PC via USB cable.




Download Warning
Not All images are correctly loaded, which may cause boot up error!
Do you still want to go on downloading anyway?

Tool will show COM port no. when PC recognized phone then tool start to download OS automatically.
If tool didn't show COM port no., please check if USB driver installed properly.

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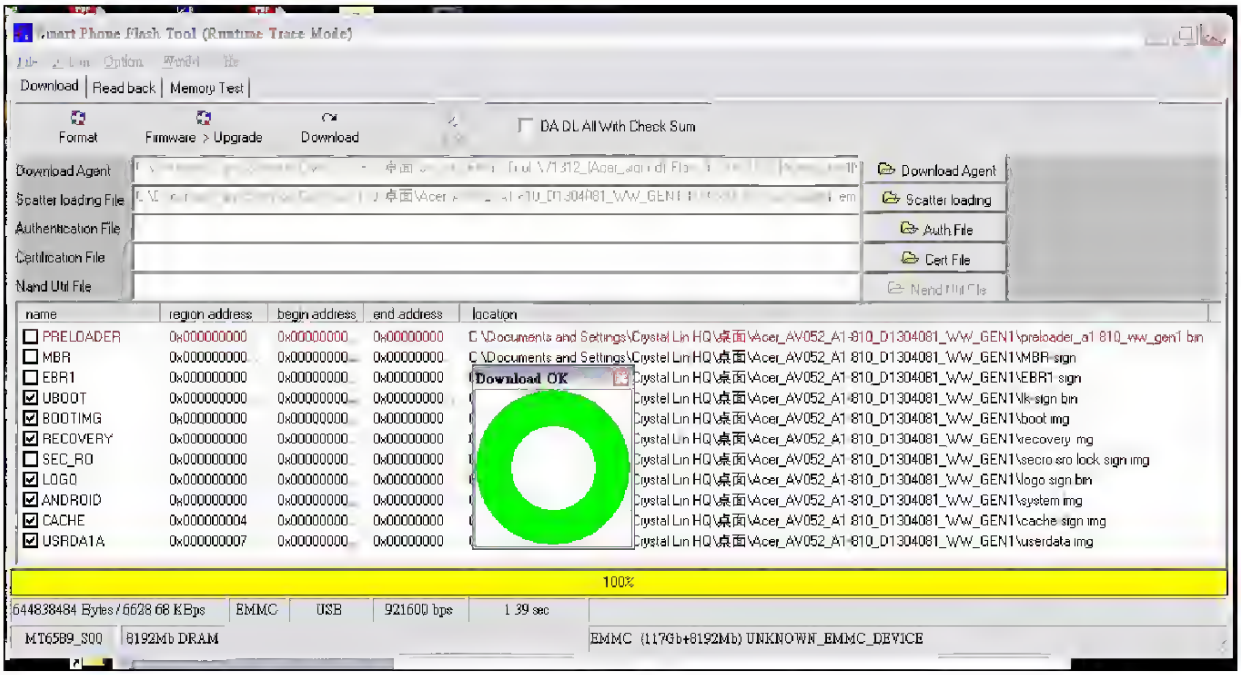
(4) When download OS finished, screen show a green circle



(5) Now you can remove USB cable and press power button to boot phone to check OS version.

How to rewrite CodeSN

1. Install AcerNVRAM_v1.006_signed.apk
2. Activate AcerNVRAM Tool：

a. Click on the Menu icon and then click on the AcerNVRAM icon

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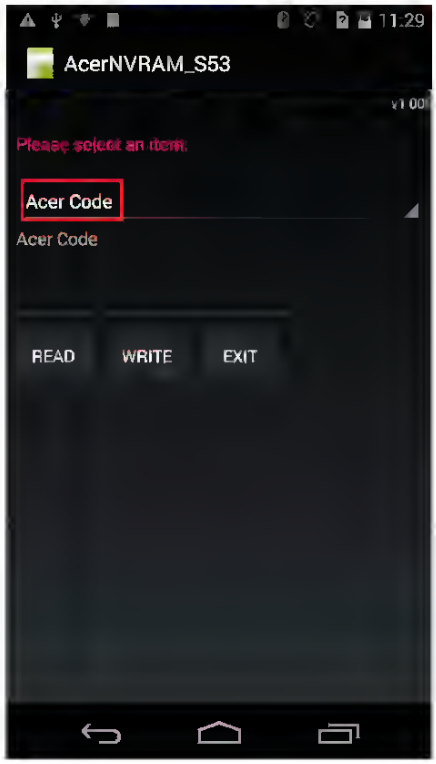
3. Read/Write NVRAM Data：(You have to reboot unit after finish Acer 22 Code written.)

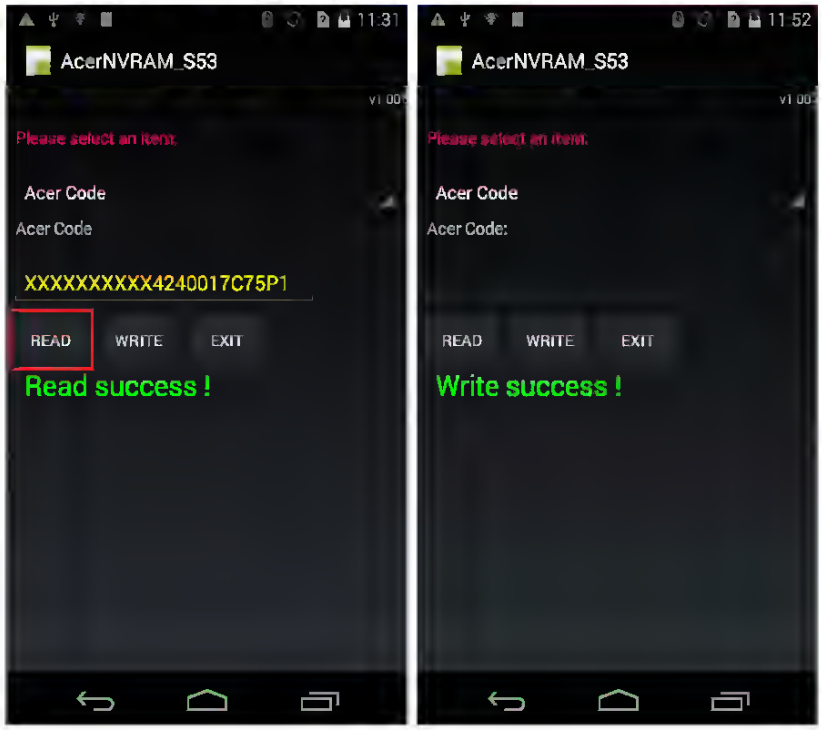
a. Acer 22 Code：

i. Select Acer Code



ii. Click on READ to get Acer 22 code or

input Acer 22 code and then click on WRITE to store it.



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Machine Disassembly and Replacement

This chapter contains step-by-step procedures on how to disassemble and reassemble the smartphone for maintenance and troubleshooting.

IMPORTANT: The use of metal tools during disassembly may damage the casing. Use plastic tools where possible.

IMPORTANT: Cover the work area with a clean, dry, lint-free cloth before placing the smartphone face down.

Disassembly Requirements

To disassemble the smartphone, you need the following tools;

- Wrist grounding strap and conductive mat to prevent electrostatic discharge.
- A clean, dry, lint-free cloth to prevent damage to the LCD during disassembly
- Plastic pry less than or equal to 0.96 mm thickness
- Tweezers (plastic and metal)

NOTE: 1. The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding components to avoid mismatch when putting back the components.

2. The screws are **SUGGESTED** not to be re-used

3. The adhesives, Gaskets and foil conductors cannot be re-used. (Except this one, **Gasket_Middle_Unibody_A5Q.**)

Related Information

The product previews seen in the disassembly procedures may not represent the final product color or configuration.

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General Information

Pre-disassembly Instructions

IMPORTANT: Before proceeding with the disassembly procedure, make sure that you do the following:

1. Turns of the power to the system.
2. Unplugs the USB adaptor and all other cables from the system.
3. Covers the work area with a clean, dry, lint-free cloth to protect the LCD panel.
4. Places the system on a flat, stable surface.

Disassembly Process

The disassembly process is divided into the following sections:

- External component disassembly
- Main unit disassembly

The following flowcharts provided in succeeding disassembly sections illustrate the entire disassembly sequence. Observe the order of the sequence to avoid damage to any of the hardware components.

NOTE: Torque is 0.9±0.1kgf/mm and driver speed is lower than 750 rpm

1. Show the instruments:

2. Push away down and open the battery cover.

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3. Screw off the 7 screws

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4. Take out the speak box:

5. Take out the hooks out from the front case and then pull the rear case out follow the red line.

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6. Screw off the screws and release the BTB connects on the MB.

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7. Take out the MB and release the L C M BTB connector.

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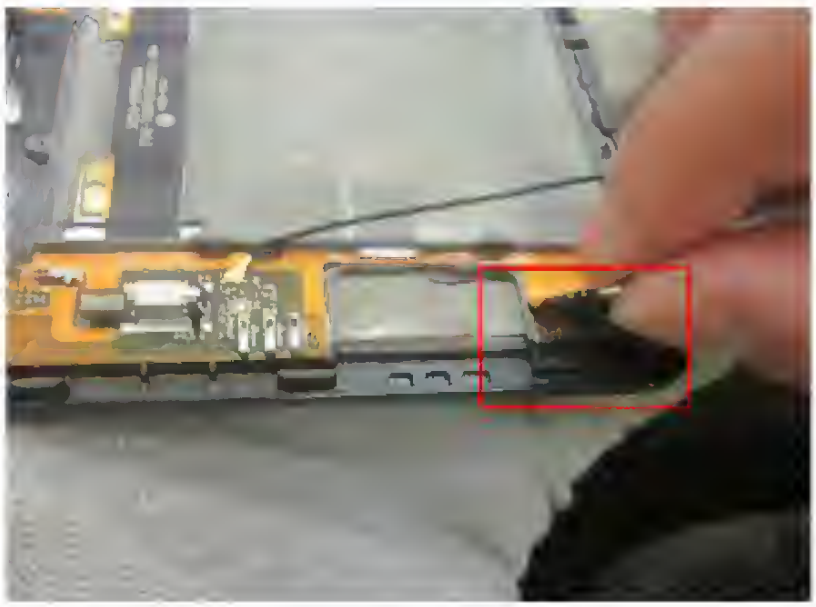
8. Take out VB FPC from front case.



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9. Take out rear cam era from front case.

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10. Take out receiver from front case.

11. Show all components of S3

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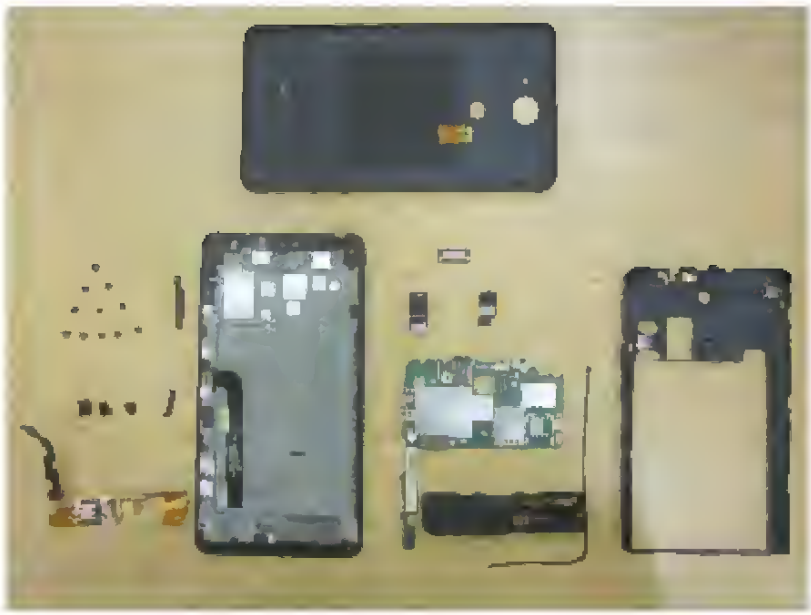

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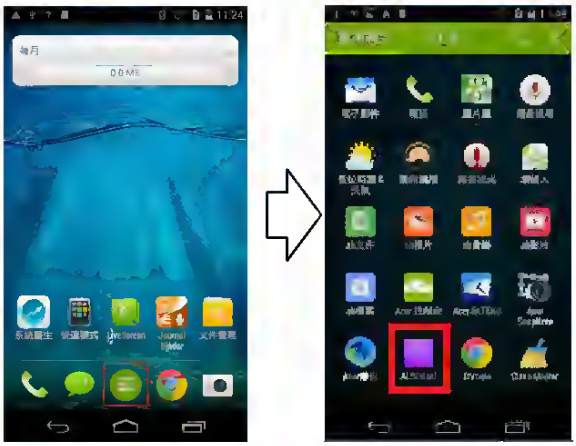
Diagnostics Tool

When you change MB, you should process below items
1. Re-write SNID
2. Sensor calibration
3. Do the diagnostic test
4. Replace IMEI label which go with spare part MB
5. Flash correct OS

Sensor Calibration SOP

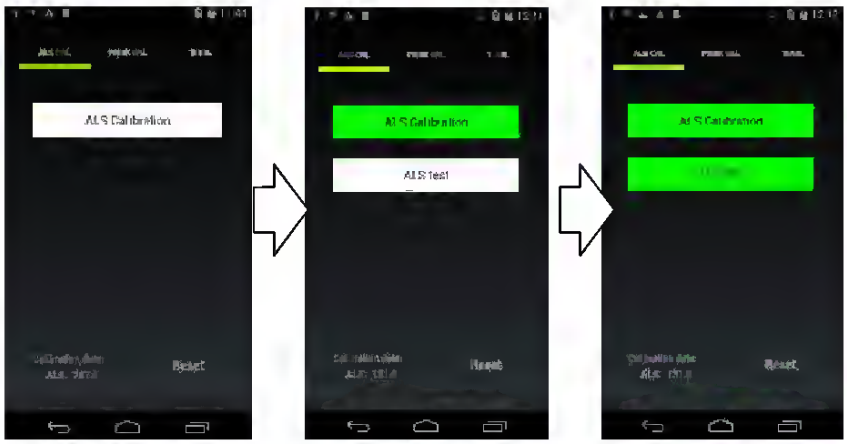
P-Sensor and L-Sensor

1. Install MtkALSPScal.apk.apk
2. Activate MtkALSPScal Tool：
3. Click on the Menu icon and then click on the MtkALSPScal icon



1. L-Sensor

i. In suitable environment and then execute ALS calibration



2. P-Sensor

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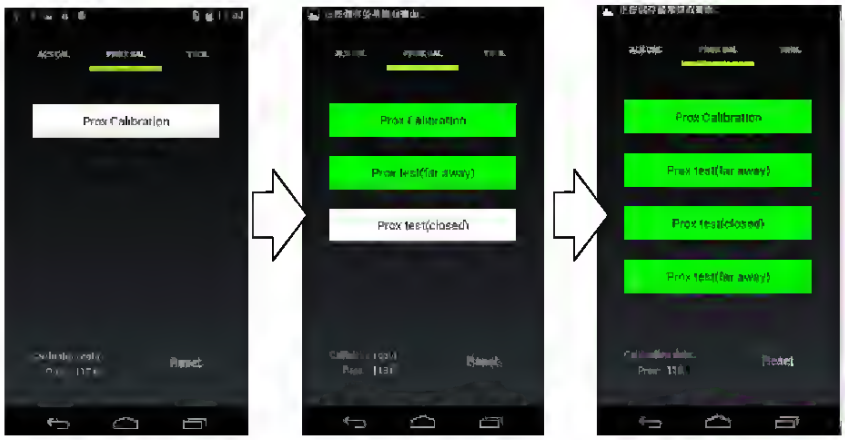
i. Execute Prox Calibration (Notice: During the process, P-sensor shall not be covered by anything)

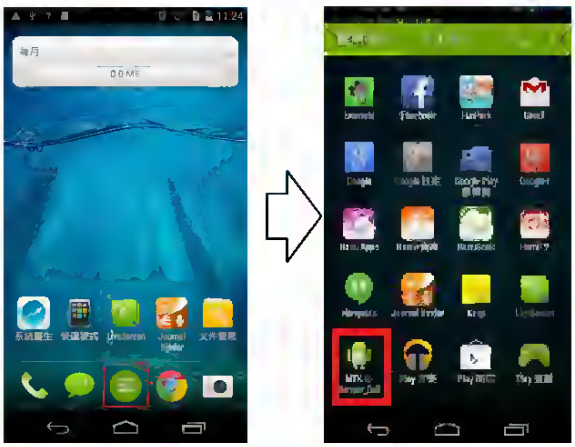
ii. Follow the steps to execute test process to make sure the calibration is finished successfully



G-Sensor

1. Install MTKGsensorCali.apk.signed
2. Activate MTKGsensorCali Tool：

a.Click on the Menu icon and then click on the MTKGsensorCali icon



b. G-Sensor

i. Put the DUT on horizontal surface and execute "Do Calibration"

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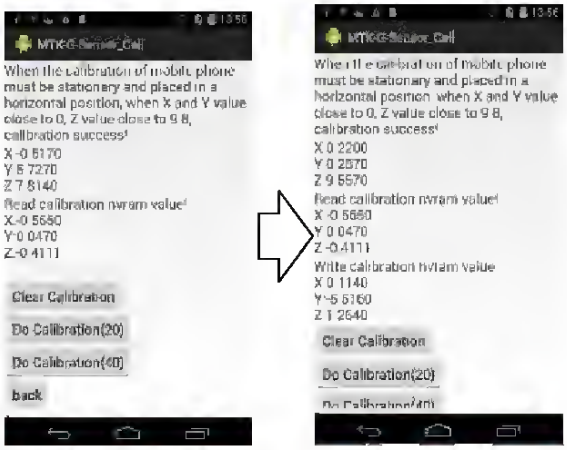


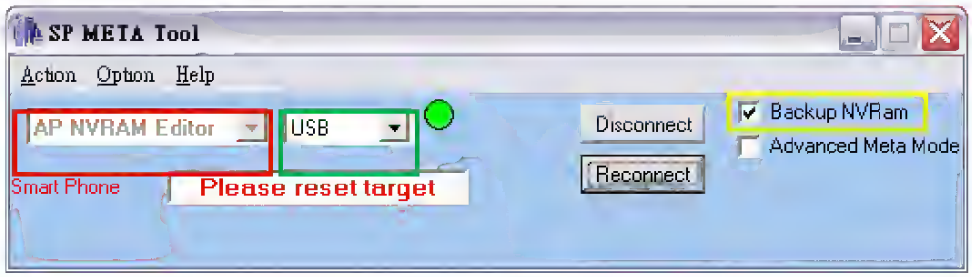
After do G sensor calibration, you have to run SP_META to backup NVRAM, otherwise calibration data will disappear after do factory reset

Run SP_META

Selected "AP NVRAM Editor" and check if "USB" and "Backup NVRAM" selected

Click "Reconnect" and wait for a while "AP Editor will appear automatically.

Please close AP Editor window



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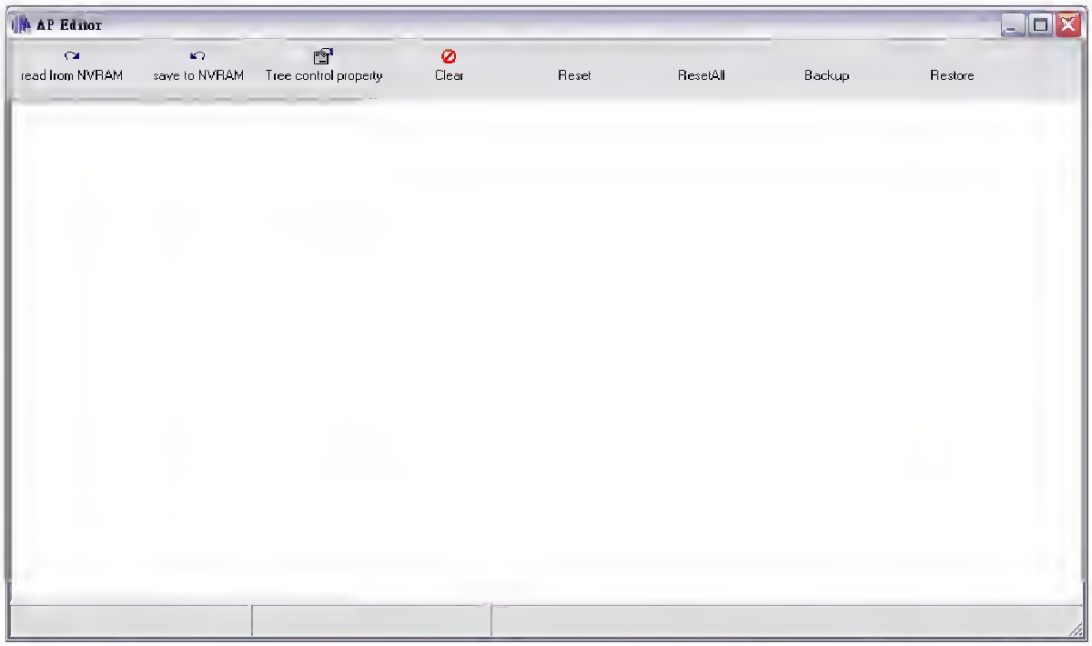
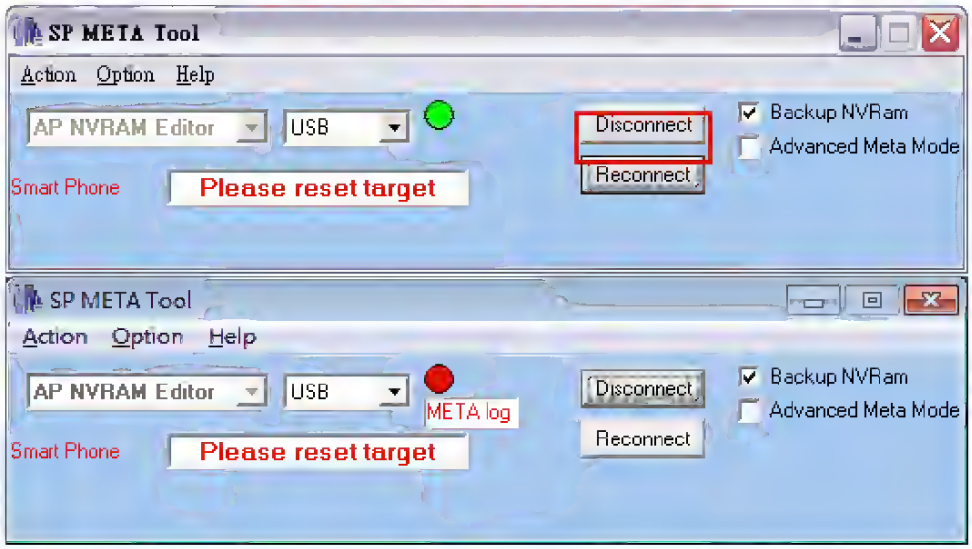


And click "Disconnect" and see the red circle before remove USB cable.



If tool cannot link phone, please check "Device manager" to see if have VCOM device detected.

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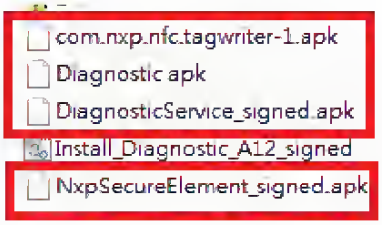
S53 Diagnostic Tool

1. Install diagnostic tool

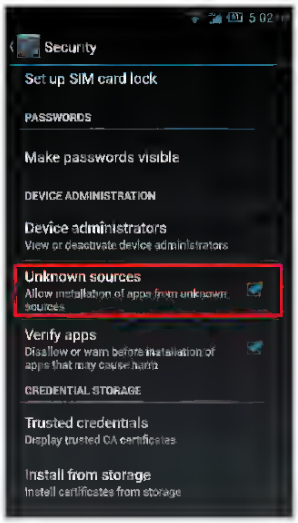
- Copy 4 apk file to MicroSD card or S520 internal storage



- Install diagnostic tool apk

◆ Enable "Unknown sources".

- Settings -> Security -> enable "unknown sources"



- Install all the four apk through "Polaris Office 5" (Polaris Office 5 provide similar file manager function)

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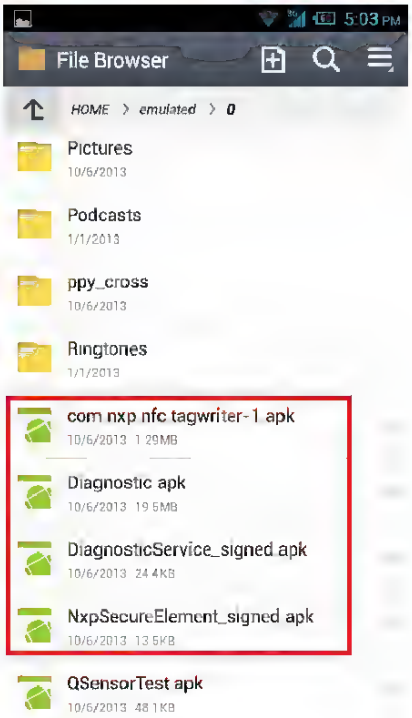

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2. UI feature

■ Tap “Menu” icon at Home screen then run “Acer Diagnostic”

■ S520 diagnostic tool main screen feature

◆ Passed test items show green background; Failed test items show red background

◆ Project name and version show on the above of main screen.
For example: Diagnostic_A12_v1.012

◆ Diagnostic_A12 log saved on the folder “/sdcard/factory/Diagnostic”：

- TestResult：record the test result
- TestLog.txt &TestPos.txt：record test steps
- TestResult log show numbers mapping below meanings for every test item
  - 0: Default value
  - 1: Fail
  - 2: Pass

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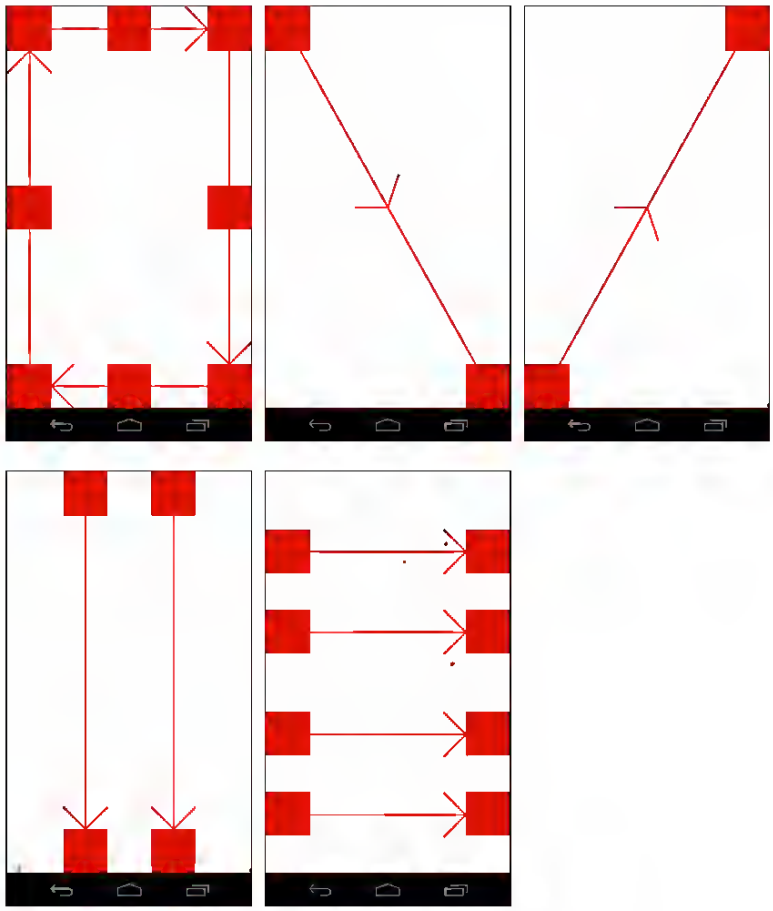
3. Test items explanation

Touch：

◆ Tests screen touch function, follow the red arrow mark to finish 5 items of touch function test.



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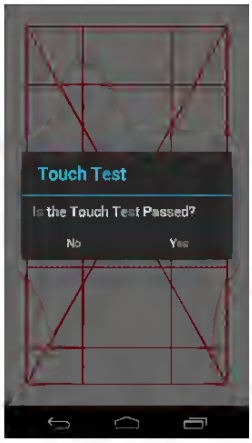
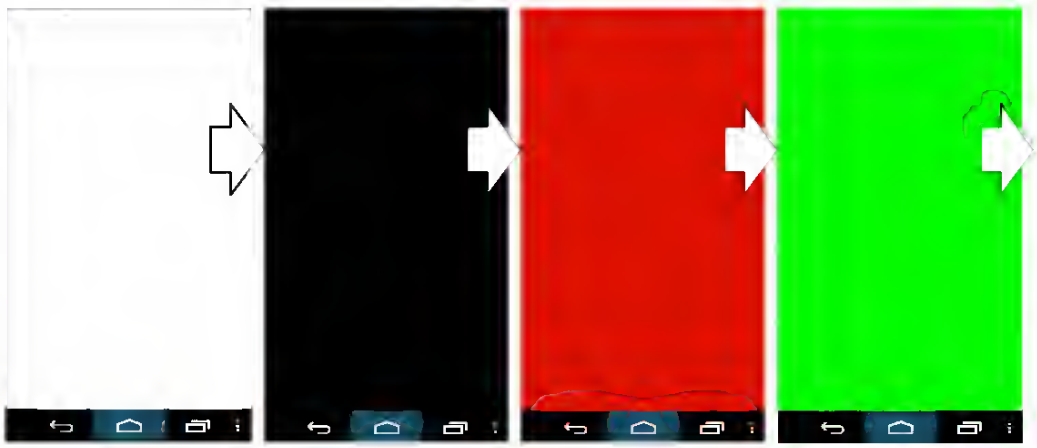
◆ When you finished all test items, tool pop up a dialog to let you judge this function test is passed or failed.



LCM :

◆ Touch screen then LCM will show the below following screen

◆ When you finished all test items, tool pop up a dialog to let you judge this function test is passed or failed.



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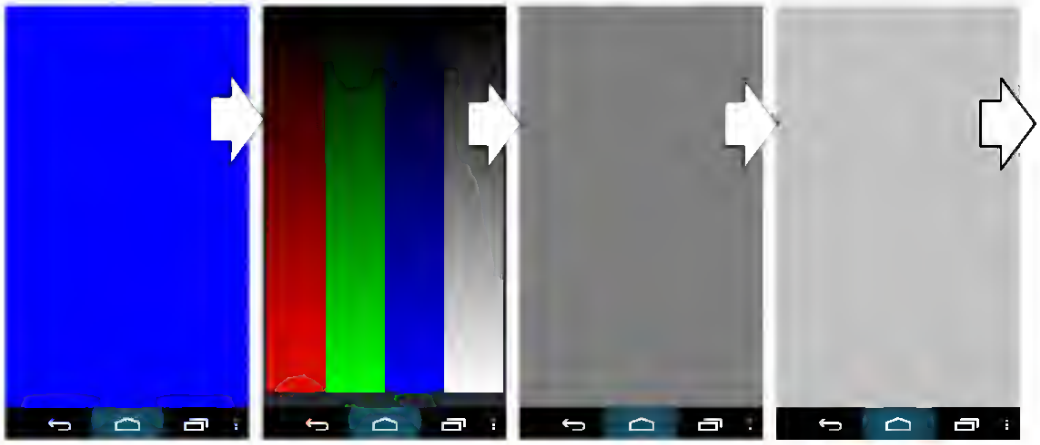
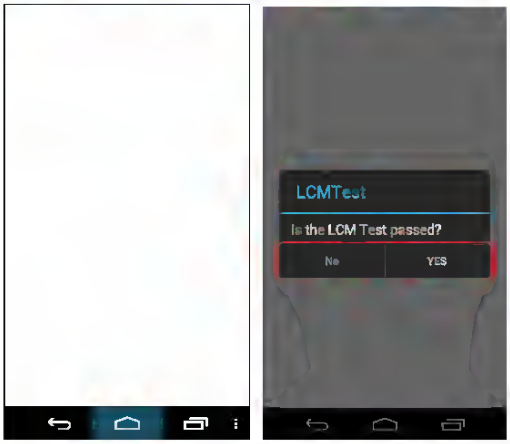


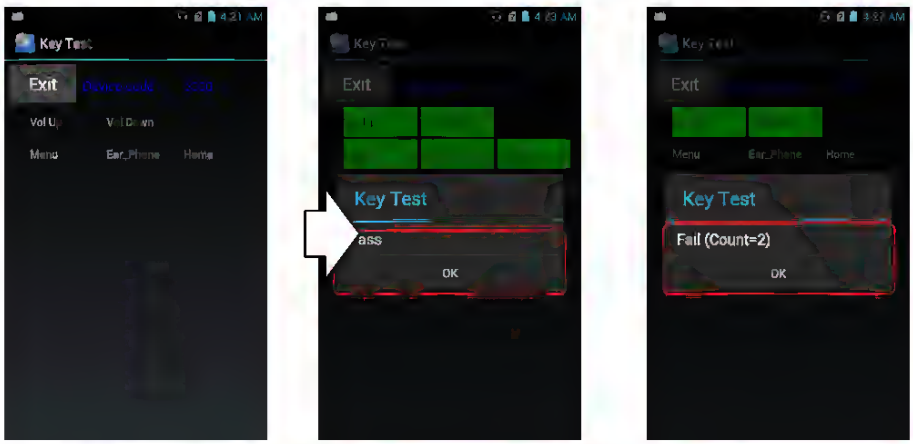


Key :

◆ Follow the picture's instruction to press related key. If the key function is passed then the color of word background will become green.

◆ Key includes : "Vol Up", "Vol Down", "Menu", "Ear_Phone", "Home", Power key didn't be tested.

◆ keys passed test then tool will judge it "Pass" automatically.



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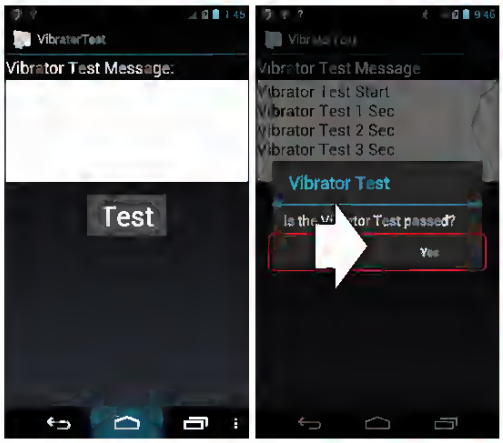
Vibrator：

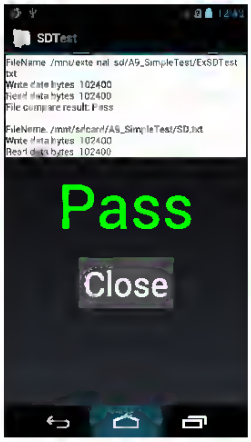
◆ Tap “Test” then S520 will vibrate three times and you can judge the test is passed or failed.



SD/ExSD Card：

◆ Insert MicroSD card

◆ Tap “SD/ExSd” then tool will show pass or fail automatically.



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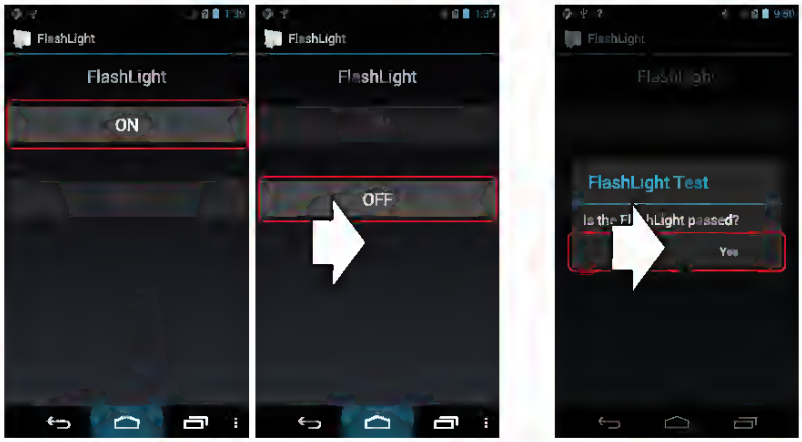
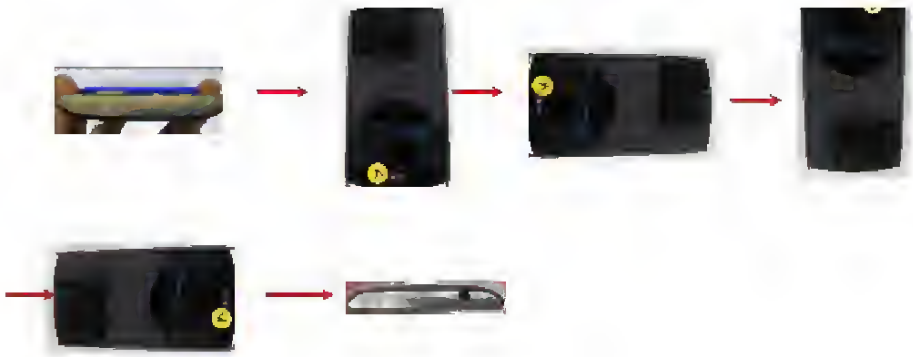
FlashLight：

- ◆ Tap “ON” and check if the flash light is on.
- ◆ Tap “OFF” and check if the flash light is off.
- ◆ You can judge the result based on the test result.



G sensor：

- ◆ Tap “Start” to start test.
- ◆ Test 6 direction and 5 seconds per direction.
- ◆ Test sequence：Z(put flat, LCM face up) → Y(put plumb, LCM face to tester) → -X(Turn S520 90 degree clockwise) → -Y(Turn S520 90 degree clockwise) → X(Turn S520 90 degree clockwise) → -Z(Turn S520 90 degree clockwise and LCM face down).
- ◆ Tool judges test pass or fail automatically.



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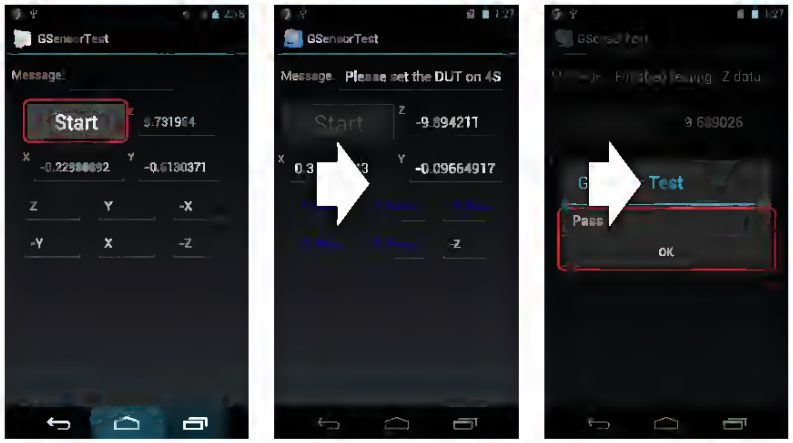
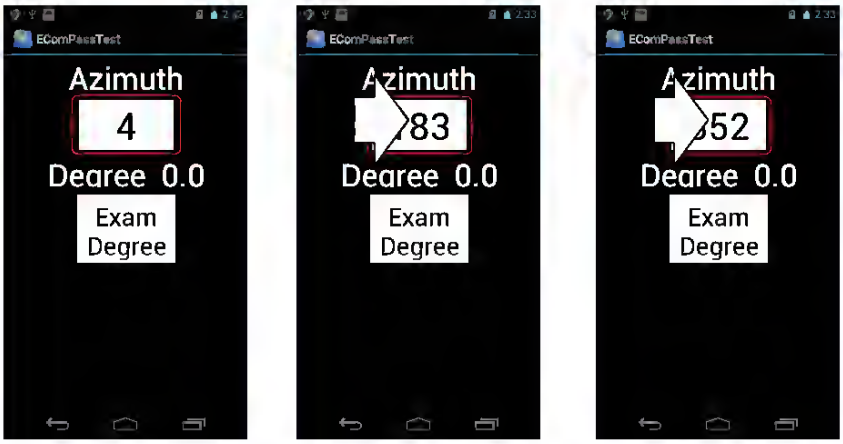


E-Compass：

◆ Check the value of “Azimuth” changed when move S300.



◆ Direct S520 toward north（the value of Azimuth is between 0~10 or 350~359）.

◆ Tap “Exam Degree” to start.

◆ Pass Criteria：

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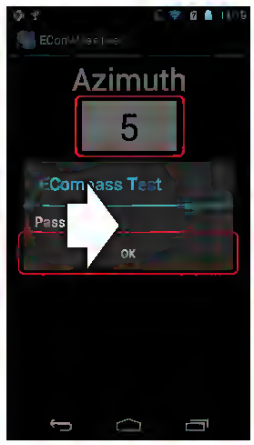
- the value of "Azimuth" changed when move S300.
- the measured angle should be less than 10 degree（350~359 or 0~10）.

◆ Tool judges test pass or fail automatically.



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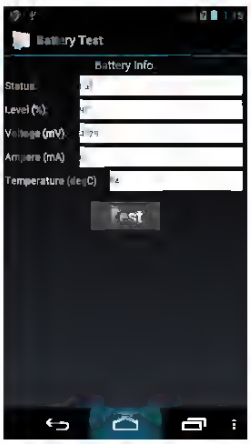
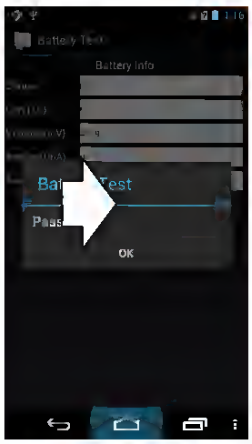
Gyro sensor：

- ◆ Tap "Gyro-sensor" to start.
- ◆ If the image is changed based on S520 moving, it's passed otherwise is failed.
- ◆ Tap "Back" key and selected "Yes" or "No" to quit the test.

Battery：

- ◆ Insert AC adapter.
- ◆ Tap "Test" to start.
- ◆ Pass Criteria：
  - Status：Charging or Full.
  - Level：0 ~ 100.
  - Voltage：3000 ~ 4250.
  - Ampere：-1200 ~ 2000.
  - Temperature：10 ~ 70.
- ◆ Tool judges test pass or fail automatically.





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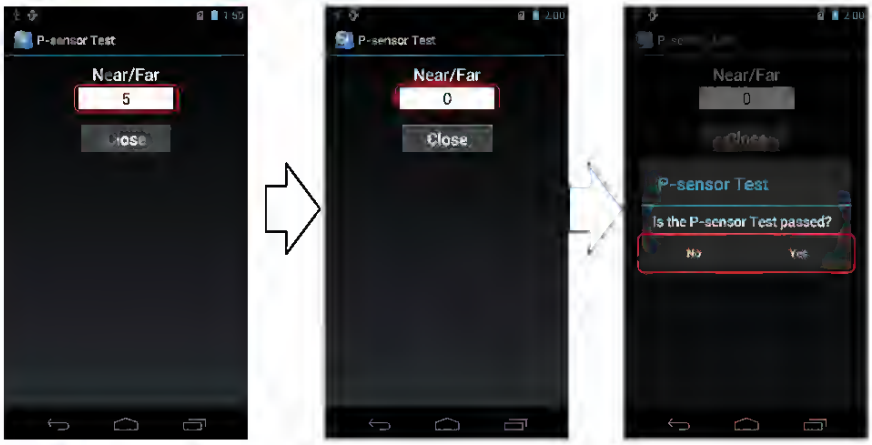
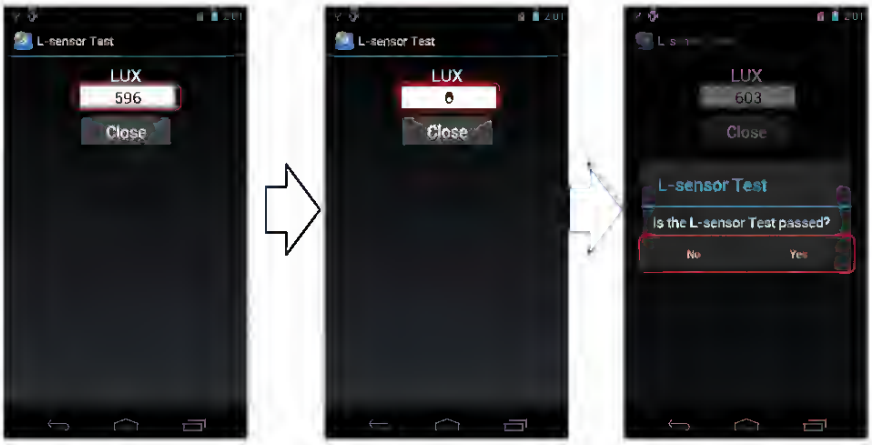
P-sensor：

◆ Use your hand to cover p sensor to test the function.
◆ Pass Criteria：
- When your hand close to p sensor（around 2cm）: the value of “Near/Far” is 0.
- When your hand move away from p sensor: the value of “Near/Far” is 5.
◆ Tap “Close” and selected “Yes” or “No” to quit the test.



L-sensor：

◆ The value of “LUX” is changed base on the brightness.
◆ Pass Criteria：
- The light is bright：the value of “LUX” is big.
- The light is dark：the value of “LUX” is small.
◆ Tap “Close” and selected “Yes” or “No” to quit the test.



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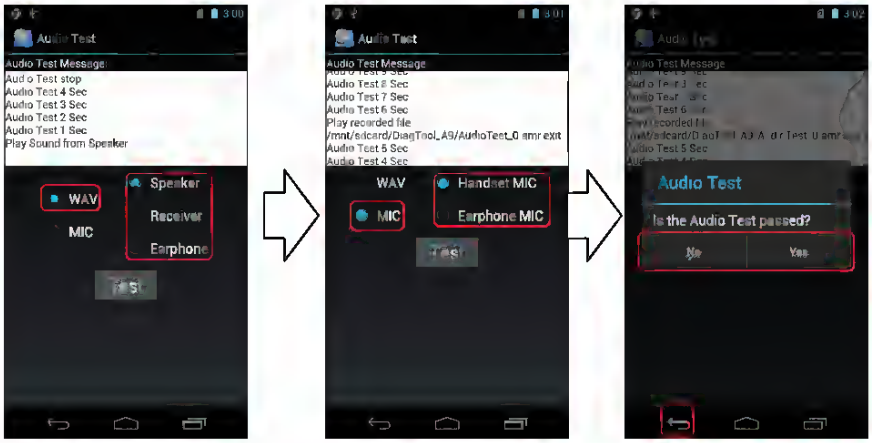
Audio：

- ◆ Connect handset before start the test.
- ◆ When test WAC, you can test speaker, receiver and earphone.
- ◆ When test MIC, you can test handset MIC and earphone MIC.
- ◆ Tap "Test" to start.
- ◆ Pass Criteria：
  - WAV -> Speaker：audio output to speaker.
  - WAV -> Receiver：audio output to receiver.
  - WAV -> Earphone：audio output to earphone.
  - MIC -> Handset MIC：record 5 sec. voice from handset MIC then output to speaker.
  - MIC -> Earphone MIC：record 5 sec. voice from earphone MIC then output to speaker.
- ◆ Tap "Back" key and selected "Yes" or "No" to quit the test.



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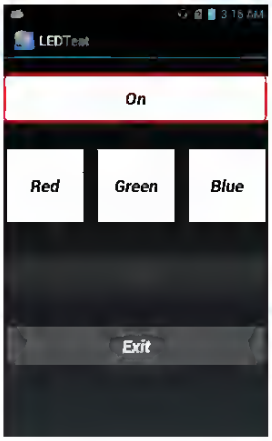
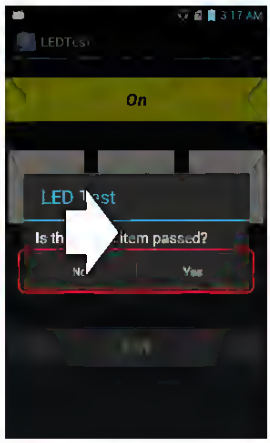
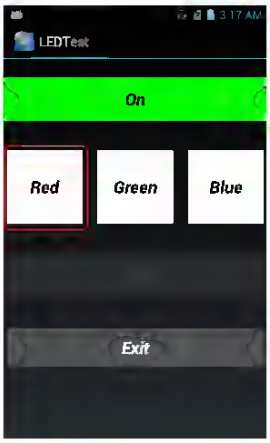
LED： LED and Key Backlight test

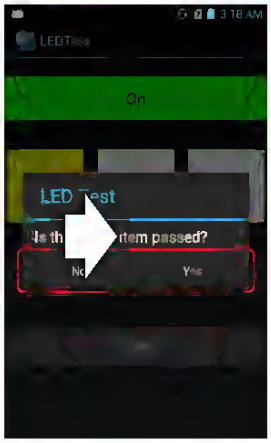
- tap "On"and check if Key Backlight is on.
- tap "Off"and check if Key Backlight is off.
- If Key Backlight is abnormal, tap "No", otherwise tap "Yes".





- Tap "Red" and check if LED is red.
- Tap "Off" and check if LED is off.
- If LED is abnormal, tap "No", otherwise tap "Yes".
- Follow above step to test "Green" and "Blue" LED.





WiFi：

- Tap "Test" to start.
- S520 will search available AP to get RSSI.
- Pass Criteria：
  - The RSSI is biger than -69, it's passed otherwise is failed.
- Tool judges test pass or fail automatically.

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GPS :

- ◆ You should test GPS function under open sky area.
- ◆ Tap "Test" to start.
- ◆ Tool judges test pass or fail automatically.

BT : BT signal test

- ◆ Tap "Yes" to enable BT

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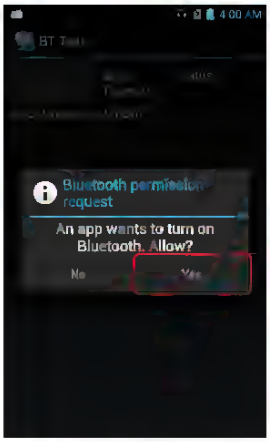
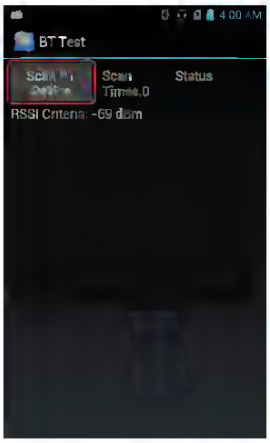
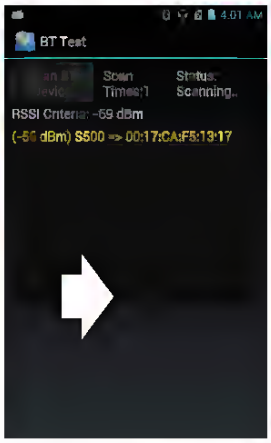
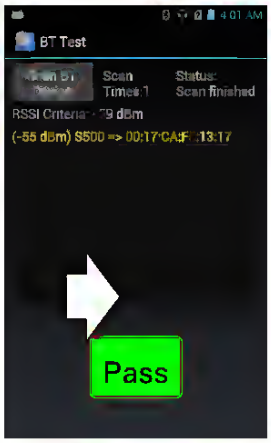


- Tap "Scan BT Device" to start BT test.
- Pass Criteria：anyone of the RSSI is over -69dBm







NFC：test NFC Read Mode.

- Check if the battery cover is assembled.
- Tap "NFC Read Mode" to enable the function.
- Tap "Accept" to start test.

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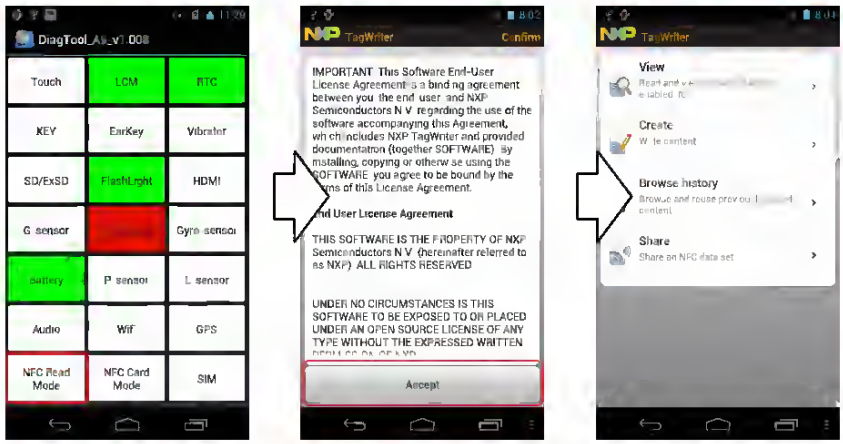
DiagTool_A5_v1.008
Touch
LCM
RTC
KEY
EarKey
Vibrator
SD/ExSD
FlashLight
HDMI
G sensor
Gyro sensor
Battery
P sensor
L sensor
Audio
Wif
GPS
NFC Read Mode
NFC Card Mode
SIM
TagWriter
Confirm
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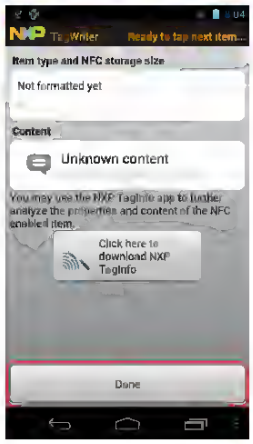
UNDER NO CIRCUMSTANCES IS THIS SOFTWARE TO BE EXPOSED TO OR PLACED UNDER AN OPEN SOURCE LICENSE OF ANY TYPE WITHOUT THE EXPRESSED WRITTEN
Accept
TagWriter
View
Create
Browse history
Share
Share an NFC data set

◆ Put test card under S520 in 4 cm. If S520 read the test card, screen show pass.

◆ Tap "Done".


TagWriter
Ready to tap next item...
Item type and NFC storage size
Not formatted yet
Content
Unknown content
You may use the NXP TagInfo app to further analyze the properties and content of the NFC enabled item.
Click here to download NXP TagInfo
Done

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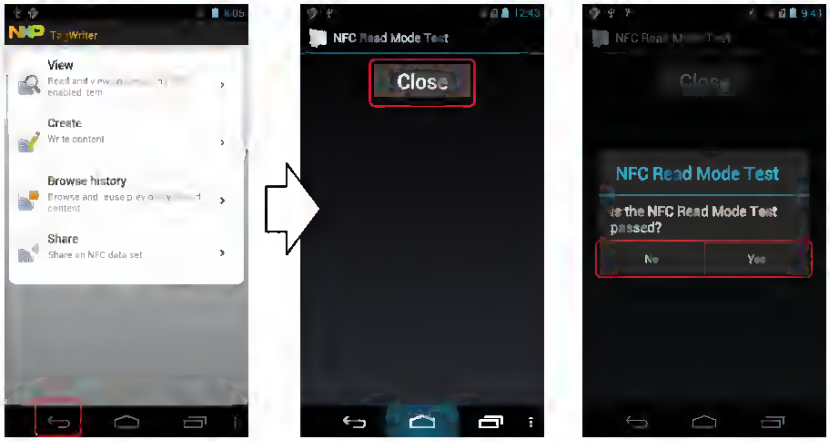
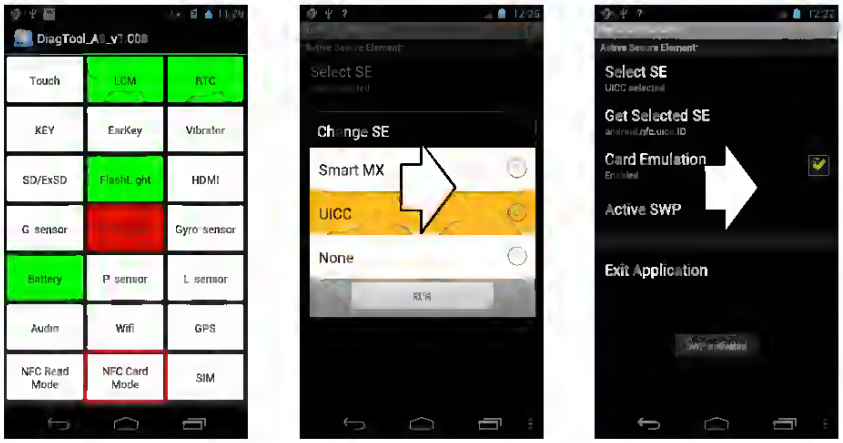
◆ Tap “Back” and “Close” to quit the test.



NFC：test NFC Card Mode.

◆ Check if “ NFC Test SIM Card” inserted.
◆ Check if the battery cover is assembled.
◆ Tap “NFC Card Mode” to enable the function.
● Tap “Select SE” &” UICC”.
● Tap “Get Selected SE”.
● Select “Card Emulation”
● Tap “Active SWP”.



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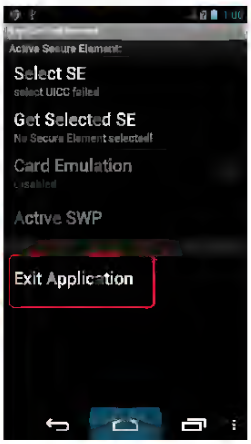
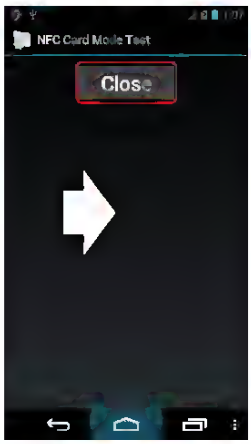
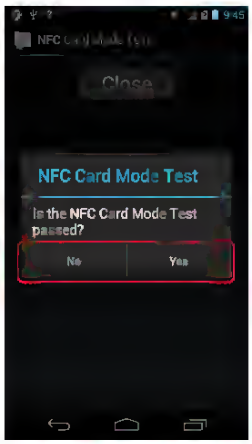
◆ Put S520 down QP3000 in 4cm and QP3000 will detect S520 to pass this test.

◆ Tap "Exit Application" & "Close" to finish this test.







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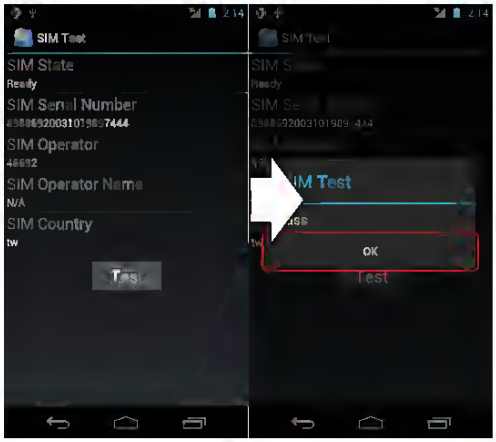
SIM：detect SIM card.

- ◆ Check "SIM Card" insert to S520.
- ◆ Tap "Test" to start.
- ◆ Pass Criteria：
  - SIM Status：Ready
- ◆ Tool judges test pass or fail automatically.



OTG: test USB disk

- ◆ Plug USB disk with OTG cable

- ◆ Tap "Test" to start this test.
- ◆ Tool judges Pass or Fail。

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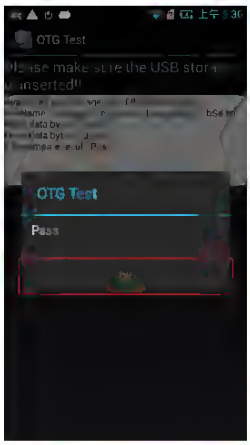

Camera：Camera test

- Test both main camera and front camera and turn via tapping right-bottom icon.

- Tap and hold the screen or tap shut icon to take photo.

- Tap left-bottom icon to check the photo just taken if any abnormal.

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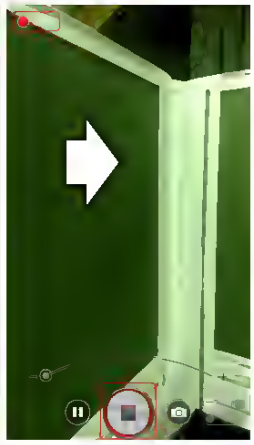
Camcorder: Camcorder

- Test both main camera and front camera and turn via tapping right-bottom icon.

- Take a video and check if any abnormal.



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Serial Number Definition

Acer 22 Barcode

Follows Code 128 standard – refer to http://www.adams1.com/pub/russadam/128code.html

Acer 22 Code SN

PPPPPPPPPPYWWSSSSSMMVV

Code	Description
PPPPPPPPPP	Acer Part Number
YWW	3 digit numeric year and week code
SSSSS	5 character unique hexadecimal code by manufacturer base and reset each week (0-9, A, B, C, D, E, F 16 code)
MM	Manufacturer code
VV	English version code

Acer SNID

YWWddddddMM

Code	Description
YWW	3 digit numeric year and week code (as above)
dddddd	6 unique decimal numbers derived from Acer 22 Code SN (SSSSS) Transfer Rule: $S_1S_2S_3S_4S_5$ dddddd = $S_1 * 16^4 + S_2 * 16^3 + S_3 * 16^2 + S_4 * 16^1 + S_5$ Example: Acer FG SN (SSSSS) = 001FD, SNID (dddddd) = $1 * 16^2 + 15 * 16 + 13 = 000509$.
MM	Manufacturer code (as above)

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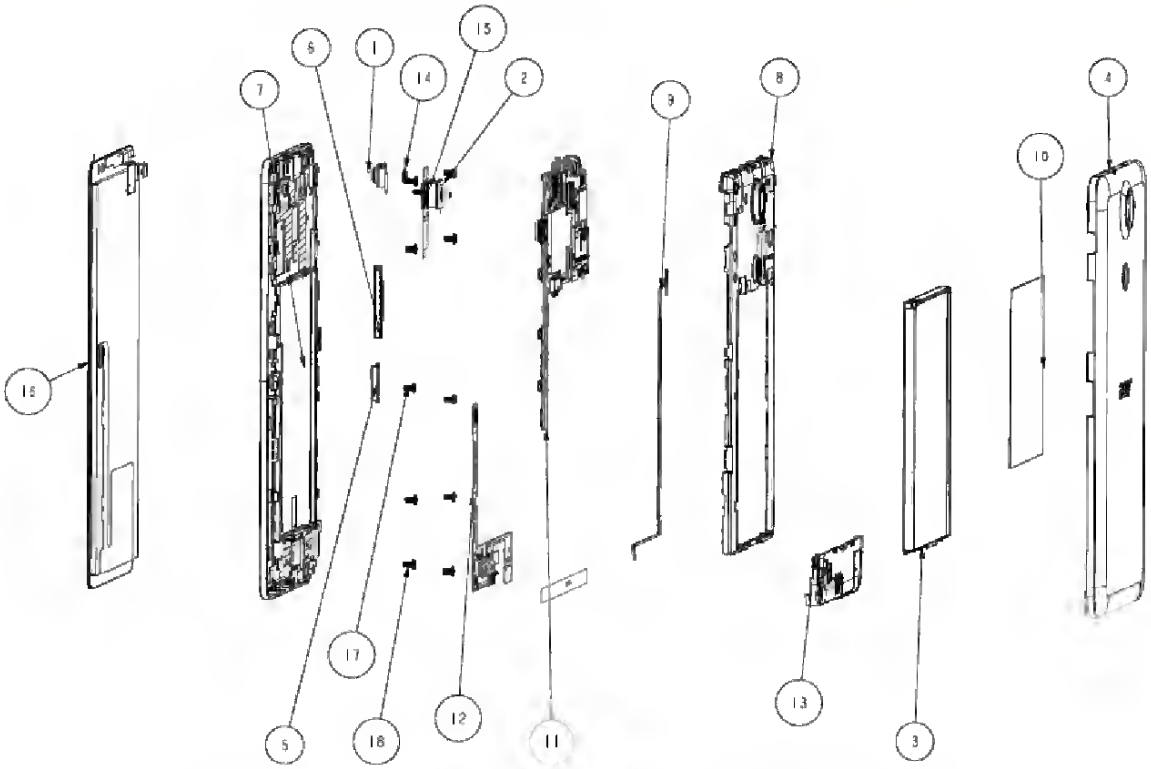
FRU (Field Replaceable Unit) List

S520 Smartphone Exploded Diagram



Index	Part Name	Part No:	Q'ty
1	A12-B-CMOS-FRONT-ASSY	TY.5F430.00W	1
2	CAM-13M-CANON	TY.5F430.028	1
3	S3-BATT	TY.2C430.015	1
4	S3-BATT-COVER	6E.2G603.011	1
5	S3-BTN-POWER	4B.2G601.001	1
6	S3-BTN-VOL	4B.2G602.001	1
7	S3-CASE-TOP-ASM	6E.2G601.001	1
8	S3-INNER-COVER-ASSY	6E.2G602.011	1
9	S3-MAIN-ANT-COAXIAL-CABLE	5K.2G601.001	1
10	S3-NFC	2E.92G60.041	1
11	S3-PCB-ASSY	5E.2G601.M01	1
12	S3-PCB-VIB-BOARD-FPC	5D.2G601.001	1
13	S3-SPEAK-MODULE-ASM	6E.2G604.001	1
14	S3-SPONGE-F-CMOS	4G.2G604.001	1
15	S3-TAPE-CONDUCTIVE-MAIN-CMOS	4G.2G605.001	1
16	S3-TP-LCM-ASSY	6E.2G606.001	1
17	SCREW-T5-MS-M1_6-L2	8F.8A55P.2R2	2
18	SCREW-T5-MS-M1_6-L3	8F.8A35P.3R0	9

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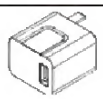
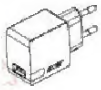
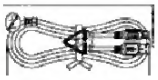
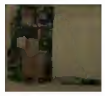
S53 Smartphone Spare Parts List

Photo	DESCRIPTION	ACER PART NO.	Qisda PART NO.
	BATTERY S3 2700MAH	KT.0010B.007	TY.2C430.015
	#ADT 1.35A 5.35V PA-1070-07AW	KP.00703.001	TY.2E430.00P
	#ADT 1.35A 5.35V PA-1070-19 CN	KP.00703.002	TY.2E430.00L
	#ADT 1.35A 5.35V PA-1070-07AE	KP.00703.003	TY.2E430.00M
	#ADT 1.35A 5.35V PA-1070-07UK	KP.00703.004	TY.2E430.00N
	HEADSET HF-AC04D-01	HC.00211.005	TY.2C430.018
	CABLE MICRO USB 1M 26X2C 30X2C	HC.70211.031	TY.5K430.004
	ASSY X1 MB MODULE SINGLE SIM/NON NFC	HB.70511.03X	CS.5J2NP.MB1
	ASSY X1 TP MODULE	6M.HHPH3.001	CS.5J2NP.TP1
	#FPC VIB BOARD GS03B1A	60.HHPH3.001	5D.2G601.001
	#RUBBER PLUS MIC-2 GS03B1A	47.HHPH3.001	4G.2G602.001
	ASSY X1 BACK CAM MODULE	KR.13M0A.001	CS.5J2NP.BCA

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	ASSY X1 FRONT CAM MODULE	KR.02M05.001	CS.5J2NP.FCA
	ASSY SPK MODULE GS03B1A	23.HHPH3.001	6K.2G604.001
	#RECEIVER XHRH150621SW45P40-01	60.HHPH3.002	2C.45017.231
	#KEY POWER GS03B1A BLACK	42.HHPH3.001	4B.2G601.001
	#KEY BTN POWER DARK RED S3	42.HHTH3.001	4B.2G603.001
	#KEY VOLUME GS03B1A BLACK	42.HHPH3.002	4B.2G602.001
	#KEY BTN VOL DARK RED GS03B1A	42.HHTH3.002	4B.2G604.001
	#WIRE MAIN ANT COAXIAL 141MM	50.HHPH3.001	5K.2G601.001
	ASSY ANT FPC/INNER-COVER BLACK SINGLE SIM EU	60.HHPH3.003	6K.2G601.001
	ASSY ANT FPC/INNER-COVER DARK RED SINGLE SIM EU	60.HHTH3.001	6K.2G603.001
	#ASSY BATTERY COVER S3	60.HHPH3.004	6E.2G603.001
	#ASSY BATT COVER RED S3	60.HHTH3.002	6E.2G603.011
	NON NFC MYLAR	47.HHPH3.002	4K.2G607.001

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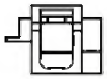
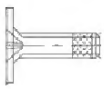
	LABEL WARRANTY SEAL V.2 56F53	47.H900Q.003	4E.G8702.002
	LABEL DEVICE TW	47.HHPH3.003	4E.2G602.011
	LABEL DEVICE GENERIC	47.HHPH3.008	4E.2G602.001
	LABEL WATER DETECTION 6 SIDED	47.H900Q.004	4E.0H101.002
	#RUBBER PLUS MIC-1 GS03B1A	47.HHPH3.004	4G.2G601.001
	#RUBBER PLUS MIC-3 GS03B1A	47.HHPH3.005	4G.2G603.001
	TAPE CONDUCTIVE CABLE GS03B1A	47.HHPH3.006	4G.2G610.001
	ADHESIVE MIC PCB GS03B1A	47.HHPH3.007	4G.2G611.001
	#SCRW M M1.6*3(2.8/.4)B-ZN NYL	86.HHPH3.001	8F.8A35P.3R0
	SCRW M FPH M1.6*2.25L NI NYL	86.HHPH3.002	8F.8A55P.2R2

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Online Support Information

This section describes online technical support service available to help you repair your Acer device. If you are a distributor, dealer, ASP or TPM, please refer your technical queries to your local Acer branch office. Acer Branch Office and Regional Business Units may access our website. However some information sources will require a user i.d. and password. This can be obtained directly from Acer CSD Taiwan. Acer's Website offers you convenient and valuable support resources whenever you need them. In the technical information section you can download on all of Acer's products including:

- Service guide for all models
- User's manuals
- Training manuals
- Software utilities
- Spare parts lists
- TABs (Technical Announcement Bulletin)

For those purpose, we have included an Acrobat File to facilitate the problem-free downloading of our technical material.

Also contented on this website are:

- Detailed information on Acer's International Traveler's Warranty (ITW)
- Return material authorization procedures
- An overview of all the support service we offer, accompanied by a list of phone, fax and email contacts for all your technical queries.

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